

Competitive Procurement of Renewable Energy Program: Implementation of Tranche 1 and Plans for Tranche 2



Allowable *Ex Parte* Briefing By:
Duke Energy Carolinas, LLC and Duke Energy Progress, LLC

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George Brown

General Manager of Distributed Energy Technology Strategy,
Policy and Strategic Investment

Competitive Procurement of Renewable Energy Program (“CPRE”) Overview

- North Carolina HB 589 became law in 2017
- **Major focus:** bring down the cost of PURPA and use competitive solicitations to implement PURPA and source new renewables
- Duke Energy Utilities will host 3 or more competitive solicitations to source ~2,660 MW of renewable energy in their respective Balancing Areas (NC and SC) over 45 months ending August 6, 2021
 - Total procurement volume is reduced if Transition solar is >3,500 MW
 - Transition = no economic dispatch
 - Contracts are 20-year terms and allow for economic dispatch by Duke
- Solicitation is independently administrated by a third party (Accion Group)
 - All bids are evaluated on a confidential basis and winning bidders selected by Accion
- Bid prices must be at or below NC Commission approved avoided cost

NC Revisions to the Implementation of PURPA

NC PURPA PRIOR TO HB 589

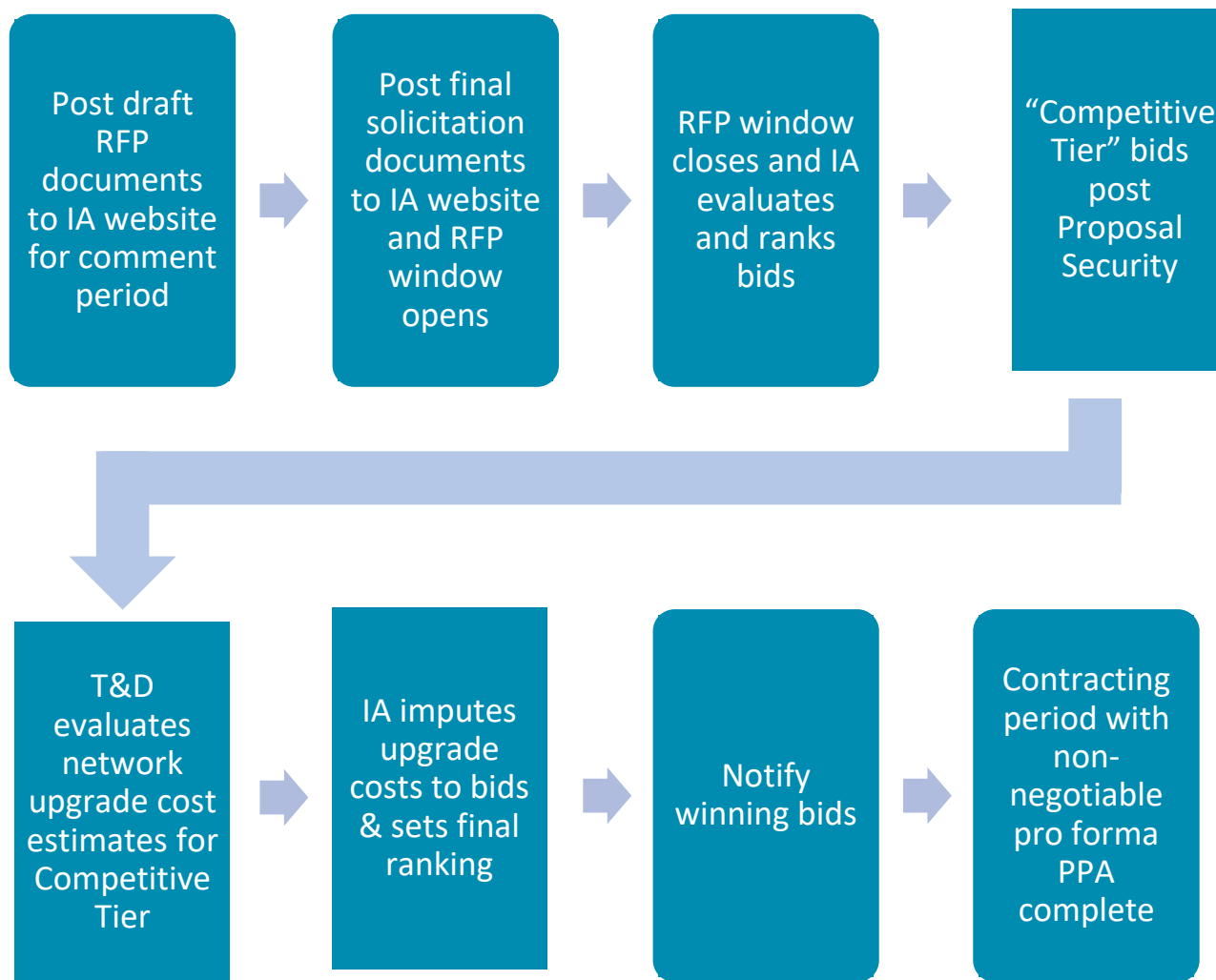
- **Standard Contract** – up to 5 MW project size eligible for 15-year fixed price contract
- **Non-Standard Contracts** – up to 80 MW receives 10-year fixed price contract
- Utility required to pay for capacity regardless of need

NC HB 589 PURPA

- **Standard Contract** – up to 1 MW project size eligible for 10-year fixed price contract
- **Non-Standard Contracts** – up to 80 MW receives 5-year fixed price contract
- Payment for capacity only when needed per the IRP

NOTE – the Standard offer project size decreases to 100KW after 100 MW is in service

Overview of CPRE Solicitation Process



CPRE Tranche 1 Results

600 MW DEC Request for Proposals

- 58 proposals ranging from 7 to 80 MW-AC totaling 2,733 MW (median 50 MW)
- All proposals were solar, 3 included storage
- 1,416 MW proposed in NC; **1,317 MW in SC**
- 11 projects were contracted totaling 465 MW
 - 9 in NC totaling 415 MW; **2 in SC totaling 50 MW**
 - 2 projects included battery energy storage

**3 bids totaling
57 MW
selected in SC
in Tranche 1**

80 MW DEP Request for Proposals

- 20 proposals ranging from 7 to 80 MW-AC totaling 1,231 MW (median 75 MW)
- All proposals were solar, 1 included storage
- 617 MW proposed in NC; **614 MW in SC**
- 2 projects were contracted totaling 86 MW
 - 1 in NC totaling 79 MW; **1 in SC totaling 7 MW**

CPRE Tranche 1 Results

CPRE Tranche 1 was a success, procuring resources at prices substantially below avoided cost with dispatch rights

DEC Winning Bids

- 11 projects were contracted totaling 465 MW
 - Average all in delivered price ~\$37.75
 - IA estimated savings versus avoided cost of **\$228 million** over 20-year term

DEP Winning Bids

- 2 projects were contracted totaling 86 MW
 - Average all in delivered price ~\$38.31
 - IA estimated savings versus avoided cost of **\$33.2 million** over 20-year term

**Total
estimated
savings = \$261
million over
20-year term**

- Interconnecting resources is a complex and lengthy process in both NC and SC today
 - Duke provided grid locational guidance to help alert developers to congested areas of the grid
- NC and SC Commissions approved a “Grouping Study” interconnection process for Tranche 1 CPRE projects to improve efficiency
- NCUC has confirmed the Grouping Study approach for NC projects in Tranche 2
- If SC projects cannot be included in the Grouping Study, they will likely be disadvantaged relative to NC projects

Network Upgrade Costs and CPRE

- Any Network Upgrade costs are imputed to the projects(s) that caused the upgrade for bid evaluation purposes
 - If the bid price plus upgrade cost is above avoided cost the project is eliminated
 - Only most cost-effective projects are winners
- NCUC approved rate base treatment for NC projects for upgrade costs because only cost-effective upgrades from winning projects would be constructed
 - Customers ultimately pay for upgrades if developers cover the upfront cost as they will increase their PPA prices to compensate for the upgrade cost
 - Note: In July 2019, the NCUC approved rate base treatment for Tranche 2

Jeff Riggins

Director of Standard Power Purchase Agreements and
Interconnection

Overview of Interconnection Process with CPRE Grouping Study

- For each CPRE tranche, bidders share a queue position (the CPRE Queue Number) set as the CPRE bid date, subordinate to prior existing Interconnection Requests
- All projects in the CPRE Queue Number position have the same queue priority for purposes of Grouping Study
- Projects in the CPRE Queue Number position are studied collectively, assuming all projects queued before the CPRE Queue Number position are interconnected
- Projects that do not elect to participate in a CPRE solicitation will maintain their Queue Position priority and continue through the serial queue process
 - These projects will continue to be studied under current SC Generator Interconnection Procedures' serial study process and will not be impacted by the grouping study evaluation process

Overview of Interconnection Process with CPRE Grouping Study

Hypothetical Example from Tranche 1: Original Queue Position of
Projects

Queue Position	Project Name
1	Project A (CPRE)
2	Project B (CPRE)
3	Project C (Not CPRE)
4	Project D (CPRE)
5	Project E (Not CPRE)
6	Project F (CPRE)
7	Project G (Not CPRE)

Overview of Interconnection Process with CPRE Grouping Study

CPRE Queue Position
established and bidders
assume that position

Queue Position	Project Name
1	Project A (CPRE)
2	Project B (CPRE)
3	Project C (Not CPRE)
4	Project D (CPRE)
5	Project E (Not CPRE)
6	Project F (CPRE)
7	Project G (Not CPRE)
8 (10/9/2018)	CPRE Queue Number (Project A) (Project B) (Project D) (Project F)

Overview of Interconnection Process with CPRE Grouping Study

Assume Project D is a
CPRE winner and all
others are not

Queue Position	Project Name
1	vacant
2	vacant
3	Project C (Not CPRE)
4	vacant
5	Project E (Not CPRE)
6	vacant
7	Project G (Not CPRE)
8 (10/9/2018)	CPRE Queue Number (Project A) (Project B) (Project D) → WINNER! (Project F)
9	Project H

Overview of Interconnection Process with CPRE Grouping Study

Winning Project D remains in the CPRE queue position and advances.

Non-winning CPRE projects are slotted in sequential order immediately after the CPRE shared position.

Queue Position	Project Name
1	Project C (Not CPRE)
2	Project E (Not CPRE)
3	Project G (Not CPRE)
4 (10/9/18 01:01)	CPRE Queue Number winner Project D
5 (10/9/18 02:01)	CPRE Non-winner Project A (original position 1)
6 (10/9/18 02:02)	CPRE Non-winner Project B (original position 2)
7 (10/9/18 02:03)	CPRE Non-winner Project F (original position 6)
8	Project H

Harry Judd, President
Accion Group, LLC

Independent Administrator: Who is Accion Group?

- Nation-wide practice conducting competitive solicitations for regulators
- Designed system used in Georgia & Arizona
- Conducted over 100 RFPs in past decade
- Major markets including California, Hawaii, Georgia, Colorado, Montana, Oregon, Florida, the Carolinas, and Arizona
- Evaluated power supplies into those states from many more states
- Confirmed by FERC as compliant with “Edgar” standards for transparency with affiliate bidding

- IA conducts the RFP – under CPRE protocols
- Reviews all RFP documents before release
- Conducts evaluation & ranking of all bids
- Monitors compliance with CPRE separation protocols
- Participates in transmission cost analysis
- Verifies analysis results
- RFP conducted through IA's Website
- Available to bidders & NCUC Staff to confirm transparency
- Participates in NCUC technical sessions & conducts stakeholder meetings

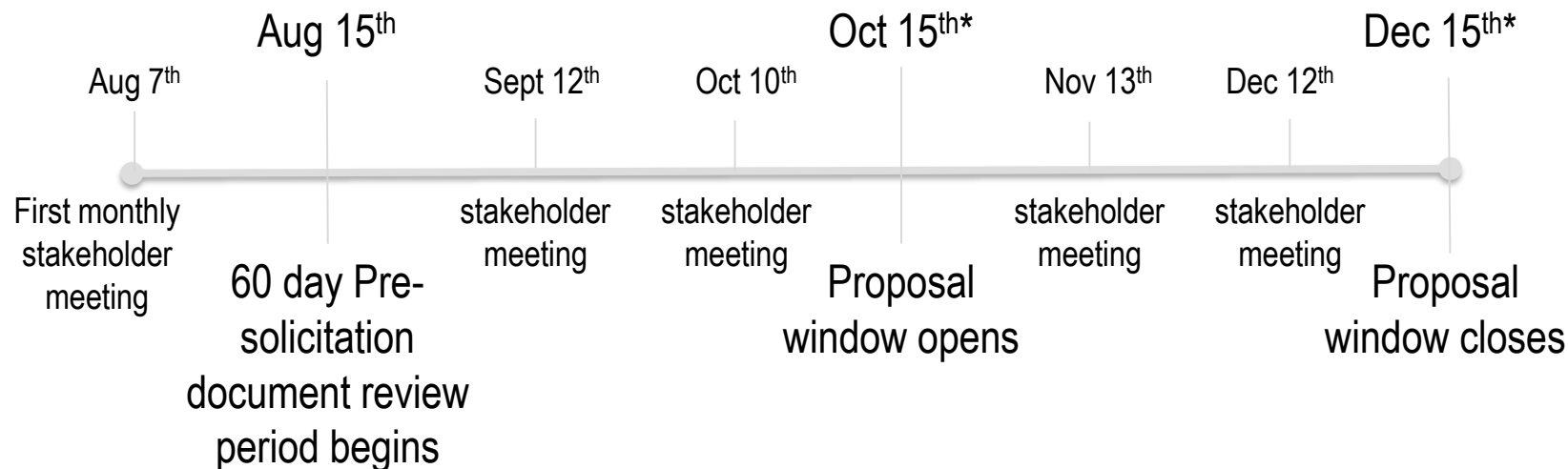
- IA conducted all evaluations & selected winners
 - Evaluation process
 - Confirmed bids & “cure” opportunity for errors by bidders
 - “Step 1 Evaluation”: Rank proposals based on net benefit to system (3X MW goal of RFP)
 - a. Primary Competitive Tier (most competitive projects)
 - b. Competitive Tier Reserve (less competitive projects)
 - c. Released Proposals (not competitive)
- *NOTE: Bidders must post “Proposal Security” to be in Competitive Tier

Primary Competitive Tier Proposals -- CPRE Tranche 1			
	Total MWs	Average Price Decrement below Avoided Cost	Average Net Benefit
DEC	1270.22	12.36	9.94 \$/MWh
DEP	469.52	14.01	10.35 \$/MWh

- “Step 2 Evaluation”:
 - Transmission study determines estimated upgrade costs for the Primary Competitive Tier proposals
 - Transmission review conducted by Duke’s “Transmission & Distribution Evaluation Team” (“T&D Team”) on the Primary Competitive Tier projects through the grouping study
 - IA participates in all transmission assessments and reviews
 - IA verifies study results and assures that bidders are treated equally
 - Upgrade costs, as determined by T&D Team, submitted to IA
 - System upgrade costs imputed to bids & bids re-ranked by IA
 - IA selects winning bids

- Complete Record of RFP Retained
- Website used for
 - All RFP information made available
 - Platform for all interaction with bidders
 - Including after IA selects winners
 - PPAs exchanged via Website
- Website records all transactions, exchanges, etc.
 - All activities time & date stamped
 - Individual record retained for bidder
 - Record retained for regulatory review
- Receipt of all bids
 - Website form required bids are below avoided cost
- Provides real-time audit of process

CPRE Tranche 2 Overview



*Subject to adjustment depending on timing of the issuance of a final order in the Avoided Cost proceeding

NCUC's CPRE Tranche 2 Order:

- Continued Grouping Study process with rate base recovery of Network Upgrades
- Required Duke to update grid locational guidance
- Required monthly stakeholder meetings to address stakeholder issues
- Asked Duke to work with market participants to establish energy storage protocols

QUESTIONS?